

Remarks

After amendment, claims 1-28, 30-36 and 38-58 are pending in the present application. Claims 1-2, 14, 34, 48 and 58 have been amended. They are labelled as original claims, rather than reinstated claims, because the previously submitted amendment was not entered. Support for the amendments to the claims can be found throughout the original specification and claims and in particular, on page eight of the specification in the definition of the term "diisocyanate". It is noted here that representative diisocyanates which can be used in the present invention include methylenediisocyanate (C₁ diisocyanate), ethylenediisocyanate (C₂ diisocyanate) and trimethylenediisocyanate (C₃ diisocyanate) (see line 16 of paragraph 2, and original claims 7 and 18), and thus the term C₁-C₂₄ diisocyanate is now used to describe that term instead of C₄-C₂₄. Both the specification (line 5 of paragraph 2), claims 1, 2, 14, 34, 48 and 58 have amended to reflect the breadth of the disclosed diisocyanate used. It is respectfully submitted that the instant amendment places the present application in condition for allowance. No new matter has been added by the presentation of this amendment.

The Examiner has rejected or objected to claims 1-5, 7-10-13, 16, 21, 25, 34, 38-47, 49, 50, 53 and 58 variously under 37 CFR 1.75(c), 35 U.S.C. §112, second paragraph and §103. For the reasons which are set forth below, Applicants respectfully submit that the present application is in condition for allowance.

The Objection and §112, Second Paragraph Rejection

The Examiner objected to originally filed claims 2, 4, 5, 10, 16, 21, 25 and 53 under 37 CFR 1.75(c) as being of improper dependent form. It is noted here that the amended claims are now in compliance with 37 CFR 1.75(c) and this objection should be withdrawn. Note that in claim 1, a C₂-C₂₅ fatty acid can be used (or a triglyceride which comprises a C₁₀-

C_{25} fatty acid) which would make R_2 a C_1 - C_{24} group (conventionally, the adjacent $C=O$ is one of the carbons of the C_2 - C_{25} fatty acid). R_3 is appropriately a C_1 - C_{24} group inasmuch as a C_1 - C_{24} diisocyanate is used (conventionally, the carbon of the isocyanate group is not part of the carbon-containing group linking the two isocyanate groups). Thus the claims as amended are in compliance with 37 CFR 1.75(c). Because the dependent claims are now of the proper scope and are narrower than the independent claims, the claims are properly dependent.

Turning to claim 34, this claim has been amended to be dependent on claim 28, not 30 as originally entered. As amended, claim 34 is no longer a duplicate of claim 33.

Turning to the rejection of claims 38-47 and 58 under 35 U.S.C. §112, second paragraph, Applicants respectfully submit that the amendment to claim 58 obviates the Examiner's rejection. According to amended claim 58, R^4 "is a group formed by reacting the amine group to which R^4 is attached with a quaternizing agent to form a quaternary amine group"; and R^5 is "a counterion to the quaternary amine group". Based upon those definitions of the groups R_4 and R_5 that claim has been rendered definite by the amendment and all of the claims which are dependent upon this claim, namely 38-47 are also definite. Note that the terms used in claim 58 which have been introduced into the claim now render the claim definite within the meaning of 35 U.S.C. §112, second paragraph.

The §103 Rejection

The Examiner has rejected claims 1, 3-5, 7-10 and 13, 49 and 50 under 35 U.S.C. §103 as being unpatentable over Werner in view of Tseng or McGovern. In particular, the Examiner McGovern for disclosing a composition made by reacting a trialkanolamine with oleic acid. He then reacts this with diisocyanate. The Examiner also cites the disclosure of ricinoleic acid in claim 4 and triethanolamine in claim 11 he cites the disclosure of

triethanolamine. Further, the Examiner cites Werner as disclosing isophorone diisocyanate in column 3 at line 22 and in column 11, the Examiner cites the disclosure of surfactants, preservatives and coloring agents. The Examiner indicates that the McGovern composition differs from the instant invention by not specifying his polyurethanes for use in personal care products.

The Examiner cites McGovern for disclosing that similar polyurethane cellular material can be used as personal care items and cited Tseng for disclosing similar cellular polyurethanes for use in personal care items.

From these disclosures the Examiner concludes that the present invention is unpatentable because it would have been obvious to the routineer to use the cellular polyurethane of Werner in personal care items as taught by Tseng or McGovern in order to expand the market for Werner's formulation. Applicants respectfully traverse the Examiner's rejection.

The present invention (as set forth in claim 1) is directed to a polymeric composition for use in personal care products which is obtained from the reaction of a trialkanolamine with a C₂ to C₂₅ acid optionally having at least one free hydroxyl group or a triglyceride comprising C₁₀ to C₂₅ fatty acids optionally having at least one free hydroxyl group under conditions to produce a mono-, di- or trialkanolamine fatty acid ester, which is subsequently reacted with a diisocyanate compound to form a polymeric composition as claimed. The obtained polymeric composition, a polyurethane trialkanolamine fatty acid ester, may be safely incorporated into personal care products, which have been carefully defined in the specification at page 6 to be a cosmetic or toiletry composition which is used on or in contact with the hair skin and/or nails. A large number of exemplary personal care products are described on page 6 of the specification. It is noted here that one of ordinary skill would never construe a release agent for a polymerization

reaction to be included in a personal care product. Moreover, the art does not suggest such a result for the reasons which are described in further detail hereinbelow.

Werner cannot cogently be cited as rendering the present invention. The invention of Werner is characterized in column 2, lines 14-42 as being directed to the use of internal release agents for injection molding applications with improved mold release characteristics. Although Werner does disclose certain fatty ester amides which may be obtained from the reaction product of an alkanolamine with a fatty acid, these fatty acid esters are not incorporated into polyurethane compounds which can even arguably be said to be the polymeric compositions according to the present invention which are found to be useful when incorporated into personal care products. Instead, Werner describes a number of reactants which are included in final polymeric compositions which are completely incompatible with personal care products, but which are favored for use in producing injection molded polyurethanes. Indeed, a review of the components of the Werner final composition shows that in addition to diisocyanate, further reactants include diamines, diazo compounds, ethylene oxide and other monomeric components which are *inconsistent and incompatible* with producing a personal care product. It is noted that nowhere is there disclosure or a suggestion that Werner produces personal care product polymeric polyurethanes. Indeed, in contrast to the present invention wherein the reaction product of the trialkanolamine and fatty acid is a major component of the final composition, the release agents of Werner (which are further polymerized with diisocyanate, in addition to numerous other polyurethane forming monomers) represent only a minor component of the final polymerization product. Moreover, the final polymeric products of Werner are injection molded polyurethane compositions, completely incompatible for use in personal care products and which are made from monomers many of which are completely incompatible with personal care products. Based upon the foregoing discussion and the clear distinction between compositions according to the present invention which are used in personal care products and the compositions of Werner which are

injection molded polyurethanes, it cannot be said that Werner renders the present invention obvious. It is respectfully submitted that it is simply not cogent to suggest that one of ordinary skill would “cherry pick” out certain components disclosed in Werner for a completely unrelated application and then fashion the present compositions for use in personal care products, especially when personal care products are not even disclosed or mentioned by Werner. In sum, Werner is an insufficient reference.

The Examiner cites McGovern and Tseng to cure the deficiencies of Werner in failing to render the present invention obvious. McGovern discloses high resilience polyurethane molded foams with improved static fatigue properties. Not only does McGovern *not* disclose compositions which are at least similar to the present invention, McGovern does not even disclose personal care products as those compositions are understood in the art. Instead, McGovern discloses compositions which can be put into polyurethane foams- compositions which wouldn’t even work in the present personal care products according to the present invention. It is respectfully submitted that McGovern is absolutely irrelevant to the present invention and clearly does not cure the defects of Werner in failing to disclose or suggest the present invention.

Nor does Tseng somehow cure the defects of Werner and/or McGovern. Tseng, like McGovern discloses a finger-manipulated article which includes a foam gripping surface. The disclosure of Tseng has absolutely nothing to do with the present invention. In addition to not disclosing compositions which are related to the present compositions other than that they contain polyurethanes, Tseng does not disclose in any way the use of any personal care product compositions as that term is defined in the art and in the present application. Applicants fail to see how Tseng somehow renders Werner and/or McGovern more relevant.

It is quite clear that none of the cited references discloses or even remotely suggests

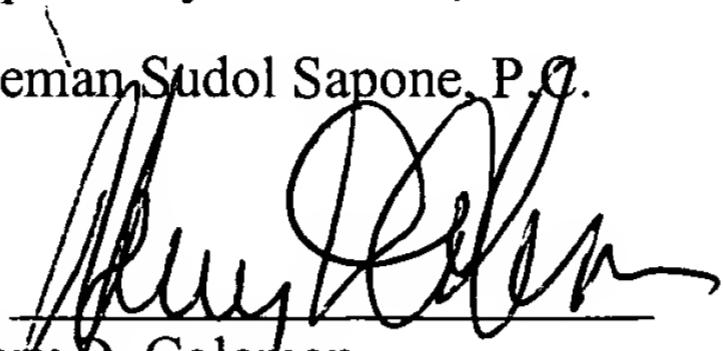
polymeric compositions according to the present invention which are useful for their chemical characteristics and are included accordingly in personal care products (i.e., cosmetics, toiletries, etc.). Nothing in the cited art motivates one of ordinary skill to produce the present compounds which find utility in personal care products. The present compounds are stand-alone polymeric compositions which are not polymerized into a foam, a tire or other three dimensional structural object as described by the art, but instead are incorporated into cosmetic compositions and toiletries for their unique chemical characteristics- characteristics which are not known from the teachings of the art. Consequently, it is respectfully submitted that the instantly claimed compositions are clearly patentable over the cited art.

For the above reasons, Applicants respectfully assert that the claims set forth in the amendment to the application of the present invention are now in compliance with 35 U.S.C. Applicants respectfully submit that the present application is now in condition for allowance and such action is earnestly solicited.

Applicants have neither cancelled nor added any claims. No fee is therefore due for the presentation of this amendment. Please charge any fee due to Deposit Account No. 04-0838. A petition for an extension of time is enclosed as is the requisite fee.

Respectfully submitted,

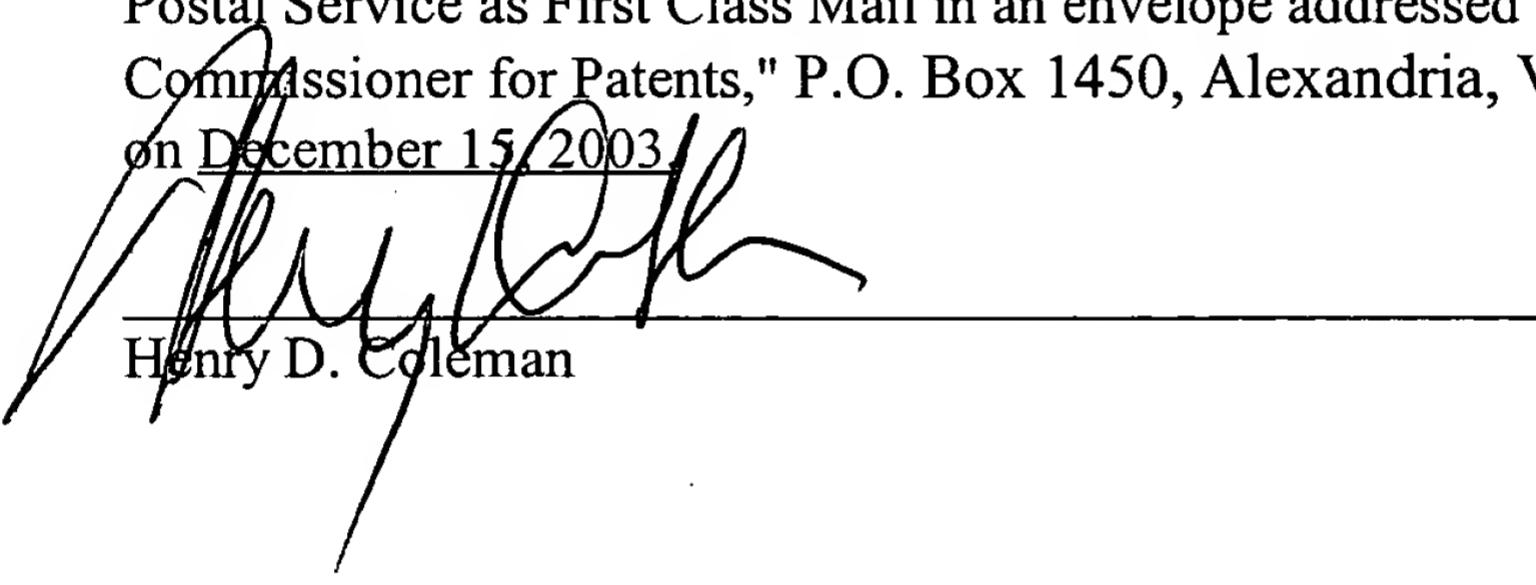
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I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: "Commissioner for Patents," P.O. Box 1450, Alexandria, Virginia 22313-1450 on December 15, 2003.


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